



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,277	09/07/2004	Wade Chute	30319.472	5276

22828 7590 03/22/2006

EDWARD YOO C/O BENNETT JONES
1000 ATCO CENTRE
10035 - 105 STREET
EDMONTON, ALBERTA, AB T5J3T2
CANADA

EXAMINER

KINNEY, ANNA L

ART UNIT	PAPER NUMBER
----------	--------------

1731

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,277

Applicant(s)

CHUTE ET AL.

Examiner

Anna Kinney

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/22/04 & 4/1/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "fibers can be subsequently pulped". The phrase "can be" indicates that the steps that follow are optional. The Examiner cannot determine the desired metes and bounds of patent protection desired by this claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurter et al (U.S. Patent 6,302,997) in view of El Shall (U.S. Patent 6,632,327).

With respect to claim 1, Hurter et al discloses a process comprising: (a) wet pre-pulping the nonwood plant fiber (col. 6, lines 61-65) under controlled conditions of temperature (col. 7, lines 42-46), solids content, and pH (i.e., dosage; col. 7, lines 5-40); (b) removing both suspended solids and dissolved solids from the fibrous portion of the pre-pulped material by filtration and dewatering (i.e., washing; col. 7, lines 57-59), and

Art Unit: 1731

reusing the filtrate in the pre-pulping step (col. 11, line 61 - col. 12, line 1). Hurter does not disclose expressly precipitation of silicate from the filtrate.

EI Shall discloses adding acid to the filtrate (col. 4, lines 48-51) to force the precipitation of solubilized silicate; and (d) removing the silica and other solids from the filtrate (col. 4, line 56 – col. 5, line 4).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to acidify black liquor filtrate and remove silica as described by EI Shall in the pulp production process of Hurter to obtain the invention as specified in claim 1.

The motivation would have been that acidification of the alkaline spent digestion liquor produces a gelatinous or gummy mass that cannot be separated from the liquor in a practical manner.

With respect to claim 2, Hurter discloses that the resulting nonwood plant fibers are subsequently pulped mechanically (Fig. 2, item 46), then bleached (Fig. 3, item 70).

With respect to claim 3, EI Shall discloses that the precipitated silica is used as a raw material for other applications (e.g., a solid product having value; col. 5, lines 26-29).

With respect to claim 4, Hurter discloses that the fiber is wet pre-pulped at a pH of about 7 or greater (e.g., alkaline; col. 6, line 61 – col. 7 line 59), which contains one specific point within the claimed range of about 7 to about 11.

With respect to claim 5, Hurter discloses that the fiber is wet pre-pulped at a temperature of from ambient temperature to about 150°C, and preferably from about 50°C to about 140°C, more preferably from about 80°C to about 120°C (col. 7, lines 42-

Art Unit: 1731

46), which contains 2 specific points within the claimed range of about 50°C to about 90°C.

With respect to claim 6, Hurter does not disclose expressly the solids content of the fiber during wet pre-pulping. (The Examiner construes the phrase "solids content" to indicate consistency.) However, Hurter does disclose that the source material consistency ranges from about 3% to about 10% (col. 21, lines 1-3); after the alkaline step Hurter discloses a consistency of about 5 to 10% (col. 13, lines 12-14); and during acid treatment of the pulp, Hurter discloses a pulp consistency of about 3 to about 10% (col. 13, lines 24-27). At the time of the invention, absent a showing of unexpected results, it would have been obvious to a person of ordinary skill in the art to optimize the solids content during the wet pre-pulping step to achieve a minimal number of dilution and thickening stages (col. 2, lines 27-28). It has been held that discovering the optimum or workable ranges or an optimum value of a result effective variable involves only routine skill in the art. See MPEP 2144.05 II.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 4,199,399 shows prehydrolysis of bagasse fiber, followed by an alkaline treatment to dissolve silica, after which the pulp is washed and bleached. U.S. 5,198,074 shows prehydrolysis of bamboo fiber, followed by alkaline digestion and washing.


Art Unit: 1731

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Kinney whose telephone number is (571) 272-8388. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALK


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700